Update Alert: Firmware updates are posted to the web on a regular basis. We recommend that you check for firmware and/or install guide updates prior to installing this product.

Installation Guide

Door lock and key interface for Lincoln & Ford Push-To-Start (PTS) vehicles.

This guide supports the installation of a DBALL in Remote Start Ready (RSR) mode. This solution offers three (3) configuration options to control your system; 3x OEM Lock Remote Start Activation*, RF Kit or SmartStart (all sold separately). Refer to page 12 for a list of RF kits and their part numbers.

*3x OEM Lock Remote Start Activation is a feature that allows users to control the aftermarket remote starter using the factory (OEM) remote control. See page 2 for more information.

Note: Only available on certain models, check the Vehicle Application Guide for compatibility with specific year and model.

RSR

Remote Start Ready (RSR) is a function that enables the interface module to remote start the vehicle completely on its own. Consequently, there is no need for an aftermarket or an OEM remote starter in order to start the vehicle from a distance. An RSR solution is commonly referred to as a Standalone installation.

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SMART START

SmartStart Compatible

See page 6 for more information.

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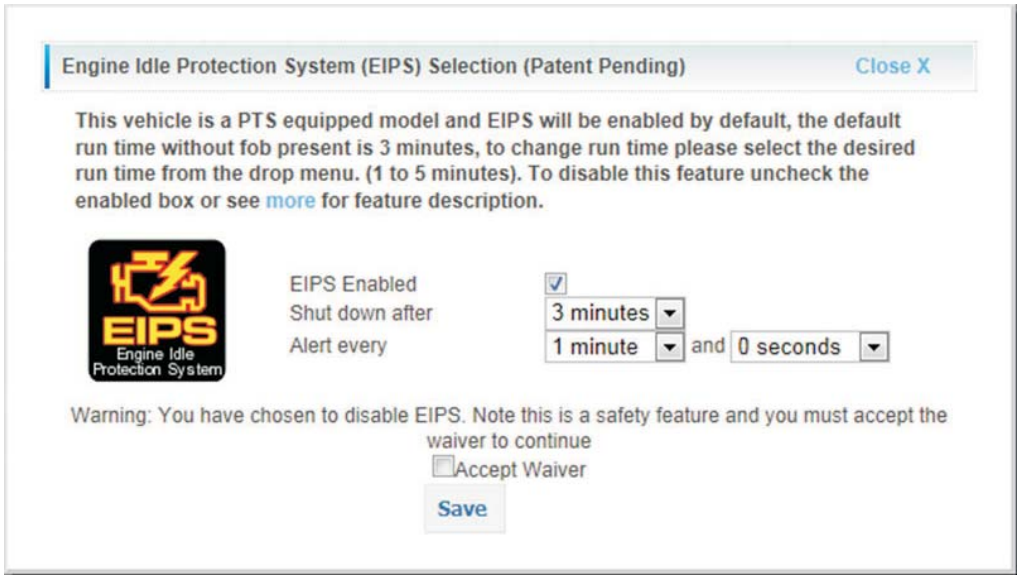
EIPS (Engine Idle Protection Shutdown)

Vehicles equipped with RFID type Push-to-Start ignition systems work by detecting a proximity key in the vehicle. They will run indefinitely if the key is removed, which could potentially lead users to exiting the vehicle while the engine is still running and the car is left idling on its own in a garage or a confined space.

To mitigate risk, we have designed a new feature that is now available on the DBALL. It will detect the presence of the RFID fob in the vehicle, through the CAN bus. If left idling for more than the pre-defined runtime (i.e. 1 to 5 minutes) without detecting the fob, DBALL will send a signal to the vehicle in order to shut off the engine.

EIPS (Engine Idle Protection System) will:

- Notify the user about the idling engine by sounding the horn with a series of short beeps.
- Shut down the engine after a pre-defined period of time (i.e. 1 to 5 minutes).
  EIPS is configured using XpressVIP. The following window is displayed whenever a DBALL module is flashed.


Engine Idle Protection System (EIPS) Selection (Patent Pending)
Close X
This vehicle is a PTS equipped model and EIPS will be enabled by default, the default run time without fob present is 3 minutes, to change run time please select the desired run time from the drop menu. (1 to 5 minutes). To disable this feature uncheck the enabled box or see more for feature description.
EIPS
Engine Idle Protection System
EIPS Enabled
Shut down after
3 minutes
Alert every
1 minute
and
0 seconds
Warning: You have chosen to disable EIPS. Note this is a safety feature and you must accept the waiver to continue
Accept Waiver
Save

- If the engine fails to shut down due to some malfunction, EIPS will go into alarm mode and will notify the user by all means possible (e.g. horn or siren).

Activating/deactivating EIPS:

- To activate EIPS, remove all keys from the vehicle and close all doors while the engine is running.
- To deactivate EIPS, do one of the following actions:
  - Open one of the doors.
  - Remote start the vehicle.
  - Turn the engine off.
  - Drive the vehicle.*

* The EIPS feature is disabled if the vehicle is in motion so there is no risk that the vehicle will shut off while driving, regardless of the fob being present in the vehicle or not.

OEM FOB Control

This feature enables you to start/stop the vehicle using the OEM remote.

Press the OEM remote LOCK button three (3) times to start the vehicle. To stop the vehicle, press the LOCK button three (3) more times.

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Vehicle Application Guide

Vehicles	2012	2011	2010	2009	CC-Power Windows Rolldown	CC-Power Windows Rollup	DL-Arm Factory Security	DL-Disarm Factory Security	DL-Door Lock Control	DL-Door Unlock	EIPS	KI-Push To Start Ign Sw Interface	PK-Universal RF Bypass-Key Req'd	RS 3x LOCK START (Start control using OEM Remote)	RS-RAP Shut Down (Remote ACC Power)	RS-Tach / RPM Output	SS-Entry Monitoring ALL Door Pins	SS-Entry Monitoring Driver Door Pin	SS-Entry Monitoring Hood Pin	SS-Entry Monitoring Trunk/Hatch Pin	ST-Brake Status (foot brake)
Ford																					
Taurus (Smart Key)	1	1	1		•	•	•	•	•	•	•	W	•	D	•	•	•	D	•	•	D
Lincoln																					
MKS (Smart Key)	1	1	1	1	•	•	•	•	•	•	•	W	•	D	•	•	•	D	•	•	D
MKT	2	2	2		•	•	•	•	•	•	•	W	•	D	•	•	•	D	•	•	D

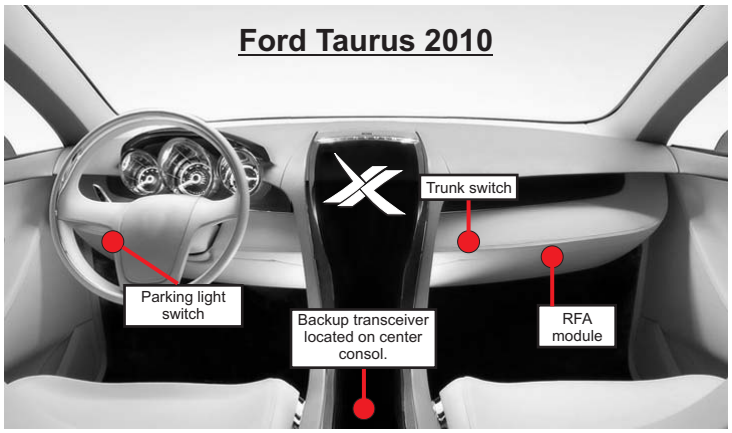
Legend:

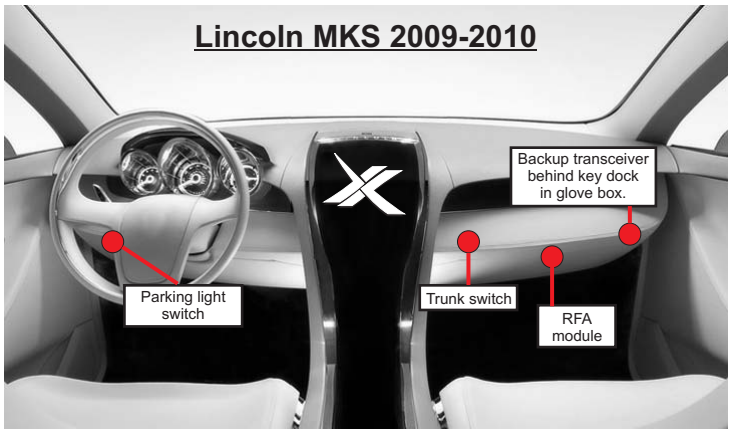
D: Data-to-Data (D2D) only
W: Wire-to-Wire (W2W) only
•: D2D and W2W

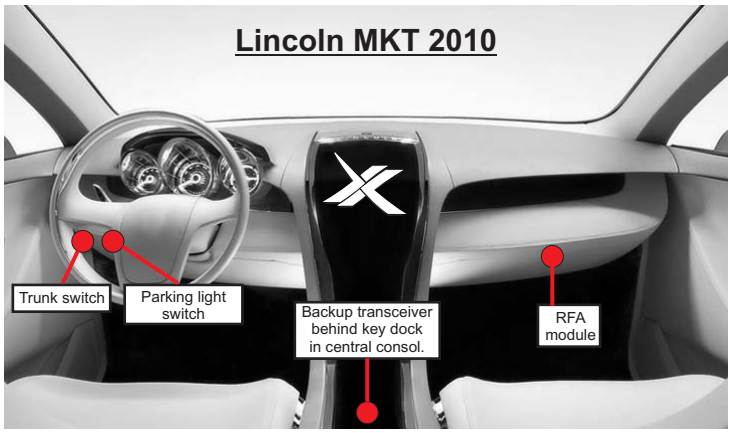
CC: Comfort & Convenience Controls
DL: OE Door Lock & Alarm Controls
EIPS: Engine Idle Protection Shutdow n
KI: Ignition Key Sw itch Interface

PK: Transponder & Immobilizer Override
RS: Engine Start & Status
SS: Integrated Security & Monitoring
ST: Function/Feature Status

Locating Key Components in the Vehicle







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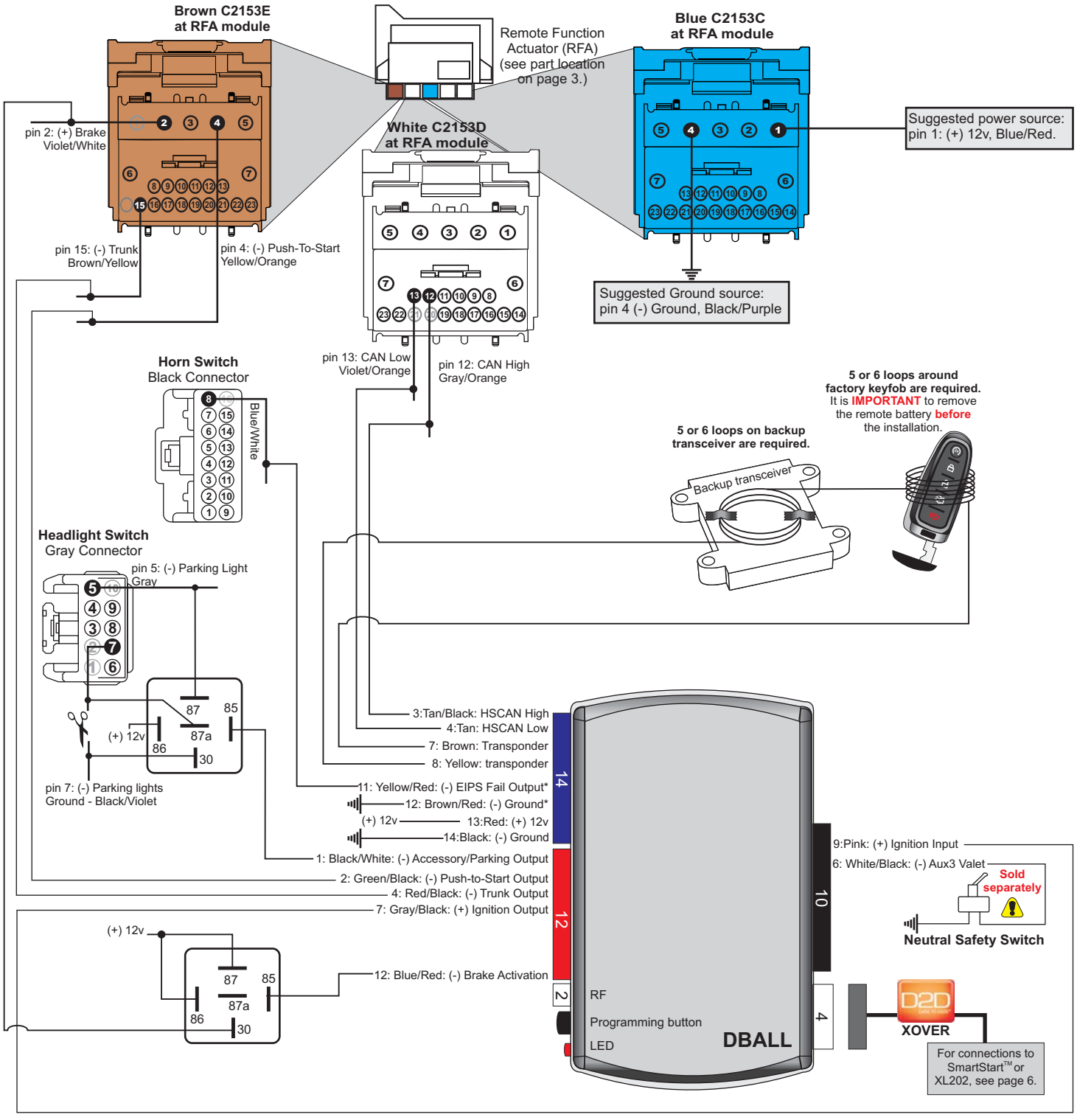
Installation Type 1: Wiring Diagram - RSR (Remote Start Ready)



---- Not required in D2D mode.

***EIPS Feature:** Do not connect these wires if you don't want to activate this feature. See page 2 for more information on EIPS Feature.

Wires are listed by pin numbers. This display is not representative of connector pin layouts, which are often stacked. All adapters are displayed from the wire side.

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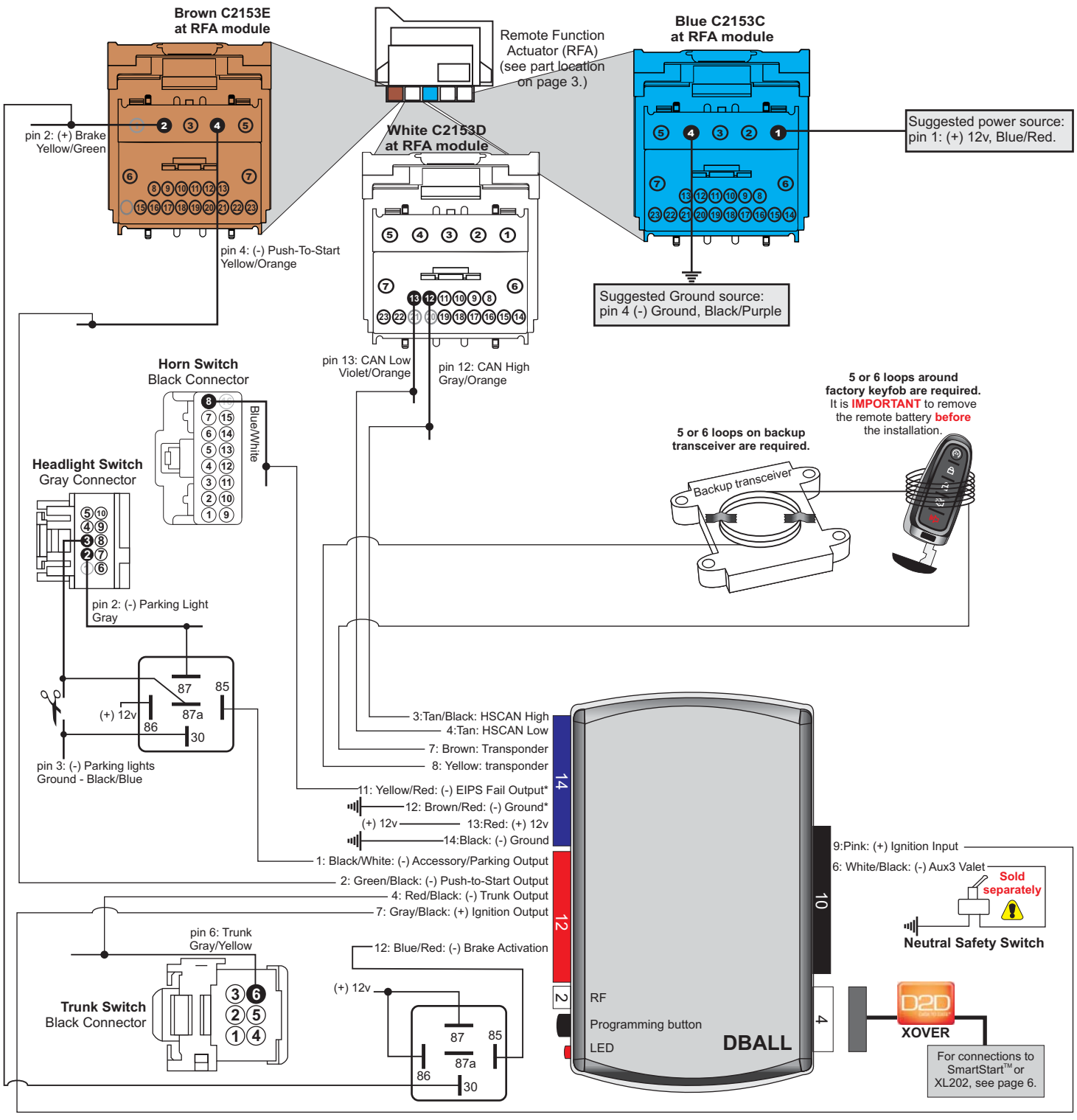
Installation Type 2: Wiring Diagram - RSR (Remote Start Ready)


Brown C2153E at RFA module
Remote Function Actuator (RFA) (see part location on page 3.)
Blue C2153C at RFA module
White C2153D at RFA module
pin 2: (+) Brake Yellow/Green
pin 4: (-) Push-To-Start Yellow/Orange
Suggested power source: pin 1: (+) 12v, Blue/Red.
Suggested Ground source: pin 4 (-) Ground, Black/Purple
pin 13: CAN Low Violet/Orange
pin 12: CAN High Gray/Orange
Horn Switch Black Connector
Blue/White
Headlight Switch Gray Connector
pin 2: (-) Parking Light Gray
pin 3: (-) Parking lights Ground - Black/Blue
5 or 6 loops around factory keyfob are required. It is IMPORTANT to remove the remote battery before the installation.
5 or 6 loops on backup transceiver are required.
Backup transceiver
3:Tan/Black: HSCAN High
4:Tan: HSCAN Low
7: Brown: Transponder
8: Yellow: transponder
11: Yellow/Red: (-) EIPS Fail Output*
12: Brown/Red: (-) Ground*
(+) 12v
13:Red: (+) 12v
14:Black: (-) Ground
1: Black/White: (-) Accessory/Parking Output
2: Green/Black: (-) Push-to-Start Output
4: Red/Black: (-) Trunk Output
7: Gray/Black: (+) Ignition Output
9:Pink: (+) Ignition Input
6: White/Black: (-) Aux3 Valet
Sold separately
Neutral Safety Switch
pin 6: Trunk Gray/Yellow
Trunk Switch Black Connector
12: Blue/Red: (-) Brake Activation
RF
Programming button
LED
DBALL
XOVER
For connections to SmartStart™ or XL202, see page 6.

---- Not required in D2D mode.

***EIPS Feature:** Do not connect these wires if you don't want to activate this feature. See page 2 for more information on EIPS Feature.

Wires are listed by pin numbers. This display is not representative of connector pin layouts, which are often stacked. All adapters are displayed from the wire side.

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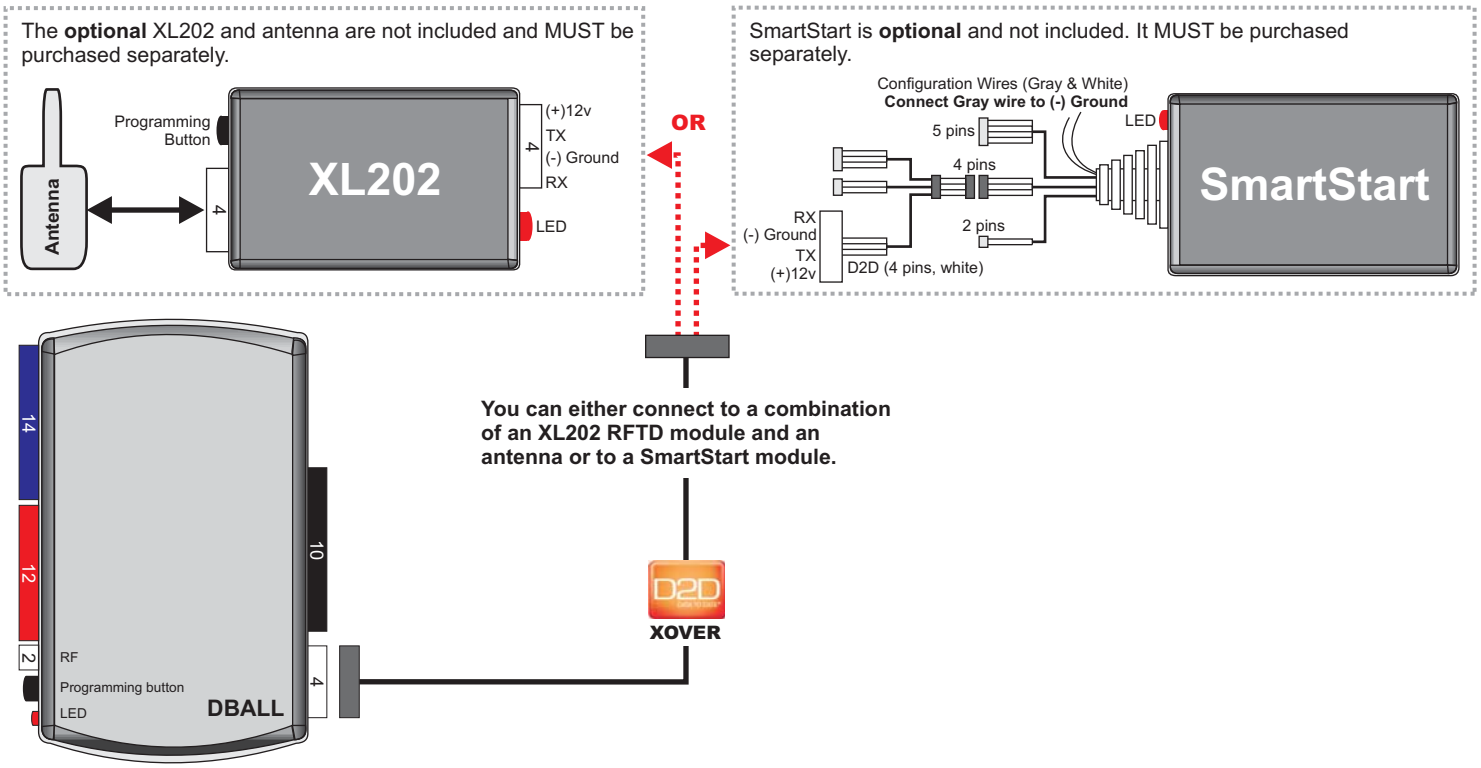
Wiring Diagram - RSR (Remote Start Ready)



Important Information

3x OEM Lock Remote Start Activation

This feature enables you to start/stop the vehicle using the OEM remote.

Press the OEM remote LOCK button three (3) times within three (3) seconds to start the vehicle. To stop the vehicle, press the LOCK button three (3) more times.

⚠ The OEM remote lock and unlock functions are inactive when the key is inserted into the ignition; therefore, the 3x OEM Lock Remote Start Activation feature cannot be used for idle mode.

SmartStart Compatible

Important!

SmartStart 200/250 **Revision B** is equipped with D2D, which means it can be connected to an interface module and used in Remote Start Ready (RSR) mode without the use of a remote starter.

In order to use the SmartStart 200/250 **Revision B** with an interface, you must enable the D2D mode within SmartStart by grounding the loose gray wire coming out of the device. You must then connect the DBALL module to the web to complete the configuration. See the Module Programming section for more information.

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DBALL/DBALL2 Module Programming

Refer to the LED Diagnostics section on page 9 for more information and for troubleshooting purposes.

Important

Make all the required connections to the vehicle, as described in the wiring diagram(s) found in this guide, and double check to ensure everything is correct prior to moving onto the next step.

Note: Before connecting either the XL202 or SmartStart module to DBALL, it is important to ensure that the proper communication protocol is enabled on DBALL using XpressVIP. This selection is done by:

1. Going to www.xpresskit.com.
2. Selecting the make, model and year of the vehicle.
3. On the search result page, click on the **Flash it** button.
4. The flash page will then be displayed listing the D2D type settings. Make your selection and flash the module.

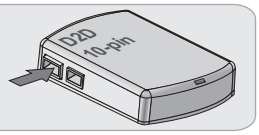
To use DBALL with an:

- RF Kit and XL202, **D2D (RFTD)** must be selected.
- SmartStart (Revision B), **D2D (SmartStart)** must be selected.

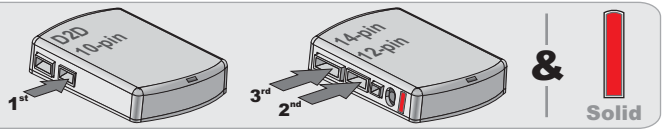
Warning against resetting the DBALL module before executing the programming sequence!
A reset will erase all the settings configured on the module using the web tool (see the above instructions). Therefore, if you reset before executing the programming sequence, you will HAVE to re-flash the module in order to re-configure the desired options.

1 Please ensure that the vehicle is in a safe location and cannot move forward during programming. For vehicles equipped with a manual transmission, ensure the gearshift lever is in the neutral position.

2 Connect the SmartStart or XL202 unit into the D2D port of the DBALL prior to connecting the power.

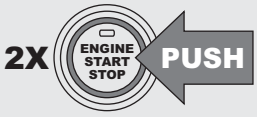


3 Connect the 10-pin, 12-pin and 14-pin harnesses to DBALL, then wait until the LED turns ON solid red.

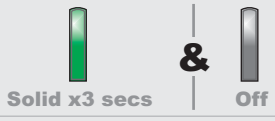


4 Make sure the key is inside the vehicle.

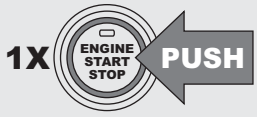
5 Press the Push-to-Start (PTS) button twice to turn the ignition ON.



6 The green LED turns ON for 3 seconds and shuts off.



7 Press the Push-to-Start (PTS) button once more to turn the ignition OFF.



Reset: See page 8 for module Reset procedure.

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Feature and Option List

Feature	Operation	Option
1	RF Output Type *Activate this feature whenever an external RFTD module is used (i.e. SmartStartTM, XL201 or XL202).*	**No RF Output***
		RFTD Output
2	Comfort Closure with lock	Disabled
		Windows Only
		Windows + Sunroof*

*** Default option**

**** Important**
The RF Output Type function must be set to **RFTD Output** to enable the Remote Start Ready (RSR) mode.
It can also be configured on the web when the module is being flashed.

Feature Programming

To enter feature programming routine
- Turn the ignition ON, then OFF.
- **Within 5 seconds**, press and HOLD the programming button until the LED turns ON orange (after 3 seconds). Release the Programming button.
- The LED will flash green once slowly to indicate the feature number is 1. After a short delay, the LED flashes red rapidly to indicate the current option of feature 1 (i.e. 1x green followed by 1x red indicates feature 1 is set to option 1). The flashing sequence will repeat until a new command is entered.

Changing feature options
- Press the lock/arm or unlock/disarm button on aftermarket transmitter to change the option of the selected feature.
- The LED flashes red rapidly the number of times equal to the current option number. After a short delay, the LED flashes green slowly the number of times to indicate the current feature. The flashing sequence will repeat until a new command is entered.

Accessing another feature
- Press and release the programming button a number of times to advance from the current feature to the next desired feature.
- The LED flashes green slowly the number of times equal to the feature number. After a short delay, the LED flashes red rapidly to indicate the current option of the current feature. The flashing sequence will repeat until a new command is entered.

When the maximum number of features or options is reached, the LED will start flashing again from the first feature or option.

Once a feature is programmed
- Other features can be programmed.
- The feature programming can be exited.

Exiting feature programming
- No activity for 30 seconds; after 30 seconds, the LED will turn ON orange for 2 seconds to confirm the end of the programming sequence.
  OR
- Press and HOLD the programming button for 3 seconds. After 3 seconds, the LED will turn ON orange for 2 seconds to confirm the end of the programming sequence.

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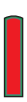
LED Diagnostics and Troubleshooting

LED	Status	Description	Troubleshooting
Module Programming			
Solid	Solid Red	Waiting on the completion of a programming sequence, or the ignition is turned on.	This can also mean there is an issue with the data bus wiring. Make sure the connections to the data bus are correct by referring to the wiring diagram. **Note:** You can press the programming button 5 times to skip this step.
Flashes	Flashes Green	Statuses are supported.	Normal operation.
Flashes	Flashes Red	CAN statuses are NOT detected.	The CAN wires may be incorrectly connected or wrong vehicle CAN Bus is used.
Flashes	Flashes Orange	A skip sequence has been detected.	Used for diagnostic purpose only. By pressing the programming button 5 times, some programming detection sequence will be skipped and some functionnality might not work.
Solid x3 secs	Solid Green x3 seconds	Module has been successfully programmed.	Normal operation.
Solid x3 secs	Solid Orange x3 seconds	Module has been successfully programmed, but one or more steps were skipped.	Used for diagnostic purpose only. By pressing the programming button 5 times, some programming detection sequence will be skipped and some functionnality might not work.
Off	Off	Module has no power.	Make sure the D2D harness is connected or that the 12 Volt is present between the red and black wires. If the 12 Volt is present, the module may be defective.
Active Ground While Running			
Flashes	Flashes green	Ground out (GWR) is active	Normal operation.
Off	Off	N/A	The Ground While Running (status) wire is incorrectly connected. Refer to the wiring diagram to make the right connections.
Inactive Ground While Running			
Flashes x1	Flashes green 1x	Lock feature.	This can also mean there is an issue with the wiring. Refer to the wiring diagram to make the right connections.
Flashes x2	Flashes green 2x	Unlock feature.	This can also mean there is an issue with the wiring. Refer to the wiring diagram to make the right connections.
Flashes x3	Flashes green 3x	Trunk feature.	This can also mean there is an issue with the wiring. Refer to the wiring diagram to make the right connections.
Remote Start Ready (RSR)			
 Flashes x7	Flashes red 7 times	Vehicle will not remote start.	The RFTD Output needs to be enabled to start the vehicle in RSR mode. It can be enabled form the web on the flashing page, or in the Feature Programming table.

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Optional RF Kits

Note: RF kits are sold SEPARATELY. Request an order from Directed using the part numbers listed below.

9211VL

Viper 1-Way Responder ONE - Plug & Play RF Kit with XL202.
UPC: **093207 08488 1**

Also available as:
- Python: 9211PL
- Clifford: 9211XL

9153VL

Viper 1-Way - Plug & Play RF kit with XL202.
UPC: **093207 05660 4**

Also available as:
- Python: 9153PL
- Clifford: 9153XL

9251VL

Viper 2-Way Responder LE - Plug & Play RF Kit with XL202.
UPC: **093207 08489 8**

Also available as:
- Python: 9251PL
- Clifford: 9251XL

9752VL

Viper 2-Way LC3 - Plug & Play RF kit with XL202.
UPC: **093207 08490 4**

Also available as:
- Python: 9752PL
- Clifford: 9752XL

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Optional RF Kits

Note: RF kits are sold SEPARATELY. Request an order from Directed using the part numbers listed below.

AF-RFK636

Astrostart 2-way LED Receiver kit with up to 1,500' of range.

UPC: 093207 08752 3

AF-RFK5225

Astrostart 2-way LCD Receiver kit offering XRT™ technology with up to 5,000' of range.

UPC: **093207 08753 0**

AS-RFK1700

Autostart 1-way Receiver kit with up to 3,000' of range.

UPC: **093207 08738 7**

AS-RFK2300

Autostart 2-way LED Receiver kit offering HDR™ technology with up to 3,000' of range.

UPC: **093207 08739 4**

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Limited One Year Consumer Warranty

For a period of ONE YEAR from the date of purchase of a Directed Electronics remote start or security product, Directed Electronics. ("DIRECTED") promises to the original purchaser, to repair or replace with a comparable reconditioned piece, the security or remote start accessory piece (hereinafter the "Part"), which proves to be defective in workmanship or material under normal use, provided the following conditions are met: the Part was purchased from an authorized DIRECTED dealer; and the Part is returned to DIRECTED, postage prepaid, along with a clear, legible copy of the receipt or bill of sale bearing the following information: consumer's name, address, telephone number, the authorized licensed dealer's name and complete product and Part description.

This warranty is nontransferable and is automatically void if the Part has been modified or used in a manner contrary to its intended purpose or the Part has been damaged by accident, unreasonable use, neglect, improper service, installation or other causes not arising out of defect in materials or construction.

TO THE MAXIMUM EXTENT ALLOWED BY LAW, EXCEPT AS STATED ABOVE, ALL WARRANTIES, INCLUDING BUT NOT LIMITED TO EXPRESS WARRANTY, IMPLIED WARRANTY, WARRANTY OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF NONINFRINGEMENT OF INTELLECTUAL PROPERTY, ARE EXPRESSLY EXCLUDED; AND DIRECTED NEITHER ASSUMES NOR AUTHORIZES ANY PERSON OR ENTITY TO ASSUME FOR IT ANY DUTY, OBLIGATION OR LIABILITY IN CONNECTION WITH ITS PRODUCTS. DIRECTED HEREBY DISCLAIMS AND HAS ABSOLUTELY NO LIABILITY FOR ANY AND ALL ACTS OF THIRD PARTIES INCLUDING DEALERS OR INSTALLERS. IN THE EVENT OF A CLAIM OR A DISPUTE INVOLVING DIRECTED OR ITS SUBSIDIARY, THE PROPER VENUE SHALL BE SAN DIEGO COUNTY IN THE STATE OF CALIFORNIA. CALIFORNIA STATE LAWS AND APPLICABLE FEDERAL LAWS SHALL APPLY AND GOVERN THE DISPUTE. THE MAXIMUM RECOVERY UNDER ANY CLAIM AGAINST DIRECTED SHALL BE STRICTLY LIMITED TO THE AUTHORIZED DIRECTED DEALER'S PURCHASE PRICE OF THE PART. DIRECTED SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES WHATSOEVER, INCLUDING BUT NOT LIMITED TO, ANY CONSEQUENTIAL DAMAGES, INCIDENTAL DAMAGES, DAMAGES FOR THE LOSS OF TIME, LOSS OF EARNINGS, COMMERCIAL LOSS, LOSS OF ECONOMIC OPPORTUNITY AND THE LIKE. NOTWITHSTANDING THE ABOVE, THE MANUFACTURER DOES OFFER A LIMITED WARRANTY TO REPLACE OR
REPAIR AT DIRECTED'S OPTION THE PART AS DESCRIBED ABOVE.

Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights and you may also have other rights that vary from State to State. DIRECTED does not and has not authorized any person or entity to create for it any other obligation, promise, duty or obligation in connection with this Part.

920-0007 2009-09

This Interface kit / Data Bus Interface part has been tested on the listed vehicles. Other vehicles will be added to the select vehicle list upon completion of compatibility testing. Visit website for latest vehicle application guide. DISCLAIMER: Under no circumstances shall the manufacturer or the distributors of the bypass kit / data bus interface part(s) be held liable for any consequential damages sustained in connection with the part(s) installation. The manufacturer and it's distributors will not, nor will they authorize any representative or any other individual to assume obligation or liability in relation to the interface kit / data bus interface part(s) other than its replacement. N.B.: Under no circumstances shall the manufacturer and distributors of this product be liable for consequential damages sustained in connection with this product and neither assumes nor authorizes any representative or other person to assume for it any obligation or liability other than the replacement of this product only.

Protected by U.S. Patents: 5,719,551; 6,011,460 B1 *; 6,243,004 B1; 6,249,216 B1; 6,275,147 B1; 6,297,731 B1; 6,346,876 B1; 6,392,534 B1; 6,529,124 B2; 6,696,927 B2; 6,756,885 B1; 6,756,886 B2; 6,771,167 B1; 6,812,829 B1; 6,924,750 B1; 7,010,402 B1; 7,015,830 B1; 7,031,826 B1; 7,046,126 B1; 7,061,137 B1; 7,068,153 B1; 7,205,679 B1; Cdn. Patent: 2,320,248; 2,414,991; 2,415,011; 2,415,023; 2,415,027; 2,415,038; 2,415,041; 2,420,947; 2,426,670; 2,454,089; European Patent: 1,053,128; Pat. Pending: 2,291,306. Made in Canada.

Additional information can be found at:

www.xpresskit.com
www.directechs.com

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